



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/524,417	02/14/2005	Hiromitsu Takeda	050034	4544
23850 7590 11/25/2009 KRATZ, QUINTOS & HANSON, LLP 1420 K Street, N.W. Suite 400 WASHINGTON, DC 20005				
EXAMINER				
JOY, DAVID J				
ART UNIT		PAPER NUMBER		
1794				
MAIL DATE		DELIVERY MODE		
11/25/2009		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/524,417

Applicant(s)

TAKEDA ET AL.

Examiner

David J. Joy

Art Unit

1794

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 August 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 and 8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 and 8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SI/22)
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date: _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____
- Paper No(s)/Mail Date: _____

DETAILED ACTION

1. Claims 1-6 and 8 are pending as amended on August 28, 2009, with Claim 7 having been previously cancelled.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Continued Examination Under 37 CFR 1.114

3. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on August 28, 2009 has been entered.

Response to Amendment

4. Applicant's amendments to the claims, in the amendment filed on August 28, 2009, obviates the previously cited rejections under 35 U.S.C. §§ 112 and 103.

- a. The rejection of Claims 1-6 and 8 under 35 U.S.C. §112, second paragraph, as being indefinite, has been withdrawn.
- b. The rejection of Claims 1-6 and 8 under 35 U.S.C. §103(a) as being unpatentable over the U.S. Patent of Lin (5,275,869) in view of the U.S. Patent Application Publication of Inoue et al. (2002/0033117; hereinafter "Inoue") has been withdrawn.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. Claims 1-6 and 8 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claims contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention. In Claim 1, the amendment includes the limitation that the "substrate [has] solar radiation reflectance of 55.3% or less and visible light reflectance of 10% or more to 53.4% or less". Also, Applicant has indicated that the

requisite support for the amendments to Claim 1 may be found in the disclosure of the present application on Page 23 and in the Examples, which are summarized in Table 1. However, those citations to the specification are deemed to not provide adequate support for those amendments, and Examiner was not able to locate anywhere else in the specification where the proper support is recited. The amended limitations (i.e., the specific property values), that Applicant asserts are supported on Page 23 and in Table 1, are only taught together in one single example, and that particular example is a comparative example, and not any of the inventive examples. As a result, the teachings of one, single example (especially a comparative example) are insufficient in terms of providing adequate support for the broad teaching as a whole.

7. Claims 2-6 and 8 are rejected accordingly, as they all depend upon Claim 1.

Claim Rejections - 35 USC § 103

8. Claims 1-6 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over the U.S. Patent of Lin (5,275,869) in view of the U.S. Patent Applicant Publication of Miyabayashi (2001/0009933).

9. Lin teaches laminate structure comprising a heat ray reflection type glass substrate, wherein the substrate has solar radiation reflectance of 55.3% or less and visible light reflectance of 10% or more to 53.4% or less, and a visible light absorbing film formed by an absorbent ink that is coated on the inner surface of the glass substrate (see Abstract; see also Column 1, Line 67 - Column 2, Line 4; see also Column 2, Lines 28-54). Specifically, Lin recites that the heat ray reflecting glass has a reflectance as high as 84%, but Lin goes further in providing that in practical use the reflecting rate is in the range of 12% to 50%, and that the reflectance may be in a range of 84.5% to 6% for the heat reflectance rate (see Column 1, Line 67 - Column 2, Line 4; see also Column 2, Line 55 - Column 3, Line 21; see also Column 4, Lines 3-9). In addition, Lin provides that the transparency rate can be as high as 65%, but that the can be adjusted so that it is from 3% to 65%, and that in practical use the transparency rate of from 8% to 40% (*Id.*). Lin also teaches an ink composition that is a black or gray printing ink coating, but Lin fails to expressly provide any details as to the ink composition. Miyabayashi, which is drawn to an ink composition, provides that it is known to have an ink composition that is dark colored, black, or dark gray in color, and that such an ink composition can comprise such pigments as azo pigments and aniline black (see Abstract; see also ¶¶ [0115]-[0119]). Additionally, Miyabayashi teaches that it is preferable that the pigment particles have a particle diameter of not more than 0.1 μm (which obviously converts to

100 nm) (see ¶ [0120]). Miyabayashi also teaches that the ink composition contains an organic high polymer as a binder (see ¶¶ [0123]-[0128]). Additionally, Miyabayashi teaches that the ink composition will absorb light (see Abstract; see also ¶¶ [0014]). While Miyabayashi fails to specifically provide that the particles will absorb visible-region light and transmit near-infrared-region light and infrared-region light, the fact that the ink composition contains the same species of pigment particle as that which is claimed, it follows that the ink taught by Miyabayashi will exhibit the same absorbent characteristics. As Lin and Miyabayashi are drawn to analogous fields of invention, it would have been obvious to a person having ordinary skill in the art at the time of invention to have made the laminate structure taught by Lin, but to use an ink composition like the one taught by Miyabayashi, thereby arriving at the presently-claimed invention.

10. Lin also teaches that the heat ray reflection type substrate is a glass sheet onto which a metallic thin film of either silver or aluminum has been formed, via vacuum deposition (see Column 3, Line 53 – Column 4, Line 2; see also Example 1 at Column 4, Line 47 - Column 5, Line 11). Additionally, Lin provides that the glass substrate, onto which the metallic thin film is formed, is then laminated to another glass substrate sheet (see Column 3, Line 53 – Column 4, Line 2). Further, Lin provides that the laminate

structure is incorporated into a glass structure (i.e., a structural member) via an intermediate member (i.e., an intermediate adhesive layer incorporated into the laminated structure) (see Column 3, Line 53 – Column 4, Line 2).

11. It is noted that for the purpose of construing the claims, the recitation of the “laminate consisting essentially of” the claimed components has been treated as if it recited the “laminate comprising” the claimed components. While it is recognized that the phrase “consisting essentially of” narrows the scope of the claims to the specified materials and those which do not materially affect the basic and novel characteristics of the claimed invention, absent a clear indication of what the basic and novel characteristics are, “consisting essentially of” is construed as equivalent to “comprising”. Further, the burden is on the applicant to show that any additional components in the prior art would in fact be excluded from the claims and that such ingredients would materially change the characteristics of the applicant’s invention. See MPEP § 2111.03.

12. With respect to such claimed properties as the degree of visible light reflectance, the degree of reduction of solar radiation, the haze value as measured according to JIS K 1705, and the value of chromaticness in the L*a*b* color system, the Office realizes that

all of the claimed effects or physical properties are not positively stated by the references. However, the combined references teach all of the claimed components, as well as the claimed structure for the laminate and the structural member. Therefore, the claimed effects and physical properties (i.e., the degree of visible light reflectance, the degree of reduction of solar radiation, the haze value as measured according to JIS K 1705, and the value of chromaticness in the L*a*b* color system) would implicitly be achieved by a composition with all of the claimed constituents. If it is the Applicant's position that this would not be the case: (1) evidence would need to be provided to support the Applicant's position; and (2) it would be the Office's position that the application contains inadequate disclosure that there is no teaching as to how to obtain the claimed properties with only the claimed ingredients/constituents.

Response to Arguments

13. Applicant's arguments filed August 28, 2009 have been fully considered but they are not persuasive.

14. Applicant argues that Lin provides a heat ray reflecting glass having as high a reflection as 84% and as high a transparency as 65%, and that the glass has light passing through crevice portions, while the present invention obtains the claimed properties

without the need for the formation of such crevice portions. However, Examiner disagrees with Applicant's assertion. The present claims recite "[a] laminate consisting essentially of a substrate ... and a visible light absorbing film ..." (emphasis added). However, as discussed hereinabove, for the purpose of construing the claims, the recitation of the "laminate consisting essentially of" the claimed components has been treated as if it recited the "laminate comprising" the claimed components. While it is recognized that the phrase "consisting essentially of" narrows the scope of the claims to the specified materials and those which do not materially affect the basic and novel characteristics of the claimed invention, absent a clear indication of what the basic and novel characteristics are, "consisting essentially of" is construed as equivalent to "comprising". Therefore, there is nothing in the claims, as presently written, to exclude the inclusion of the crevice portions taught by Lin, or to differentiate that which is presently claimed from that which is taught by Lin. Also, as discussed hereinabove, while Lin does recite that the heat ray reflecting glass has a reflectance as high as 84% and a transparency as high as 65%, Lin also provides that the reflectance may be in a range of 6% to 84.5% and that in practical use the reflecting rate is in the range of 12% to 50%, and that though the transparency rate can be as high as 65%, it can be adjusted so that it is from 3% to 65%, and that in practical use the transparency rate of from 8% to 40%.

15. Applicant also argues that there is no suggestion or motivation for combining the Lin patent with the Inoue publication. Nevertheless, this argument is moot, as the rejection of the claims as being unpatentable over Lin in view of Inoue has been withdrawn, as recited hereinabove.

Conclusion

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to David J. Joy whose telephone number is (571) 272-9056. The examiner can normally be reached on Monday - Friday, 7:00 AM - 3:30 PM EST.

17. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Ruthkosky can be reached on (571) 272-1291. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

18. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Mark Ruthkosky/
Supervisory Patent Examiner, Art Unit 1794

/DJJ/
Examiner, Art Unit 1794
11/20/2009